

REMARKS

In the present paper, claims 2-5, 8, 9, 13, 14 and 16-18 have been amended and claim 1 has been canceled. Claims 2-18 are presented for consideration by the Examiner in view of the following remarks.

The Present Application

The present application is directed to a method and apparatus for transmitting dedicated message information and simulcast message information using a cellular transmission infrastructure. The invention permits simulcasting services and dedicated transmission services to be offered using the same wireless network. The technique conserves bandwidth as compared to existing cellular telephone systems that offer information services.

The technique constructs frames that includes both simulcast message information and dedicated message information. The relative size and location of the time slots for those messages are established by control information at the beginning of the frames. The control information fills time slots at the beginning of the frame (present application, FIGS. 2 & 3; p. 10, line 13). Several time slots at the beginning of the frame are used, so that neighboring/adjacent base stations may use different time slots for transmitting control information (p. 10, lines 1-3).

The control information in the time slots at the beginning of the frame is therefore not simulcast. In that way, interference between adjacent base stations is controlled (p. 9, line 3).

For example, amended claim 2 of the present application, which has been rewritten in independent form including the limitations of original claim 1, is directed to a method for use in a time division multiple access wireless communication system of simulcasting information and

transmitting dedicated message information from a plurality of proximately located base stations forming a cellular pattern over the same wireless frequency channel. Frames are constructed for transmission by the plurality of base stations comprising control information, simulcast information and dedicated message information within predetermined time slots of the frames. The simulcast information and the dedicated message information are allocated to time slots of the same frame predetermined by the control information of the frame.

The frames are constructed in the method of claim 2 to contain control information that fills time slots at the beginning of the frame. That the control information *that fills time slots at the beginning of the frame* is varied between predetermined time slots within the frame such that immediately proximate base stations transmit control information in different predetermined time slots.

The control information is therefore not simulcast, but is instead offset in time so that immediately proximate base stations do not transmit control information in the same time slot.

The Examiner has rejected claims 1-18 based on the judicially created doctrine of obviousness-type double patenting, over claims 1-11 of U.S. Patent No. 6,885,630. Additionally, the Examiner has rejected claims 1-4, 10-12, 14, 15 and 18 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,485,463 to Godoroja et al. (“Godoroja”), and has rejected claims 5, 6, 8, 9, 13 and 16-17 under 35 U.S.C. § 103(a) as unpatentable over Godoroja in view of U.S. Patent No. 6,535,552 to Baum (“Baum”).

The Godoroja Patent

Godoroja discloses a system for transmitting multiple, individual paging messages to individual subscribers. As shown in FIG. 6, an example data sequence contains a simulcast slot

100 and three slots 110, 112, 114 containing message data. As noted by the examiner, the simulcast slot 100 comprises control information (items 104, 106, 108).

Information from the simulcast slot is used by the paging devices *in all base station coverage areas* to determine whether a message is waiting and, if so, in which subsequent time slot it will be delivered (Godoroja, col. 4, lines 33-43; col. 6, line 62 – col. 7, line 39). The message is then delivered in one of the time slots 110, 112, 114 (col. 7, lines 40-56).

Discussion

The Specification

Applicants have amended the first paragraph of the specification, which was originally added by preliminary amendment. That paragraph includes the claim of priority, and has been amended to include the U.S. patent number and issue date of the parent.

The Claims

Double Patenting

As noted, the Examiner has rejected claims 1-18 under the judicially-created doctrine of obviousness-type double patenting, over U.S. Patent No. 6,885,630. Applicant has filed herewith a terminal disclaimer and associated fee in compliance with 37 C.F.R. § 1.321(c) and submits that that rejection is thereby overcome.

Rejections over Cited Art

Each of the independent claims has been amended to include the following limitation:

wherein said control information fills time slots at the beginning of the frame and said control information filling time slots at the beginning of the frame is varied between predetermined time slots within said frames such that immediately proximate base stations transmit control information in different predetermined time slots

For example, claim 2 has been rewritten in independent form, including the limitations of base claim 1, as that claim was originally presented (without the amendments included in the preliminary amendment). Additionally, the underlined text in the above excerpt has been added in each of the independent claims to clarify that the control information that is “varied between predetermined time slots . . .” is the same control information that “fills time slots at the beginning of the frame.”

Applicants respectfully submit that the independent claims are patentable because Godoroja does not teach control information meeting both of the following two limitations:

1. The control information fills time slots at the beginning of the frame, and
2. The control information is in predetermined time slots within the frames such that immediately proximate base stations transmit control information in different predetermined time slots.

In rejecting claim 2, the Examiner has identified the information represented by elements 102, 104, 117, 118 of FIG. 6 as being control information “varied between time slots” (O/A of 9/28/05, p. 5, para. 19).

As to elements 117, 118, that information does not “fill time slots at the beginning of the frame,” as also required by the independent claims. Instead, that information is in subsequent time slots A, B and C, and does not “fill” those time slots but instead shares those time slots with message data 124 (see Godoroja, FIG. 6; col. 7, lines 24-56).

As to the information represented by elements 102, 104 of FIG. 6, also identified by the Examiner as control information as claimed in claim 2, that information is simulcast and therefore is not “in predetermined time slots . . .” as required by claim 2 (Godoroja, col. 6, lines 43-51).

Godoroja therefore does not teach or suggest any control information that both resides “at the beginning of the frame” and is “varied between predetermined time slots within the frames such that immediately proximate base stations transmit control information in different predetermined time slots,” as required by the independent claims in the case.

Conclusion

Applicants therefore respectfully assert that claims 2-18 are now in condition for allowance, and earnestly request that the Examiner issue a Notice of Allowance.

Should the Examiner have any questions regarding the present case, the Examiner should not hesitate in contacting the undersigned at the number provided below.

Respectfully submitted,

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